



# NASA Policy Directive

**NPD 8910.1A**Effective Date: January 08, 2003  
Expiration Date: January 08, 2008**COMPLIANCE IS MANDATORY**[Printable Format \(PDF\)](#)

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## Subject: Care and Use of Animals

**Responsible Office: Office of the Chief Health & Medical Officer**

### 1. POLICY

- a. NASA will conduct activities involving vertebrate animals, recognizing its responsibility for the stewardship of the animals and to the scientific community and society, and adhering to the ethical principles of respect for life, societal benefit, and nonmaleficence.
- b. All activities to which this NASA Policy Directive (NPD) applies will comply with the "Public Health Service (PHS) Policy on Humane Care and Use of Laboratory Animals" (PHS Policy), and the guidelines in the National Research Council's "Guide for the Care and Use of Laboratory Animals."
- c. All NASA Centers, including Component Facilities, conducting activities, regardless of funding source, involving animals will, at all times, be covered by a current Animal Welfare Assurance(AWA) approved by the Office of Laboratory Animal Welfare (OLAW), National Institutes of Health.
- d. All NASA Centers, including Component Facilities, conducting activities involving animals will actively seek to receive and maintain accreditation by the Association for Assessment and Accreditation of Laboratory Animal Care International (AAALAC International).

### 2. APPLICABILITY

This NPD applies to NASA Headquarters and NASA Centers, including Component Facilities, and to all activities involving animals funded by or sponsored by NASA, or conducted in or on NASA facilities, aircraft, or spacecraft. Such activities include those conducted under a cooperative agreement, or grant, contract, reimbursable agreement, or other arrangement or agreement, entered into by NASA and another Government agency, private entity, non-Federal public entity, or foreign entity.

### 3. AUTHORITY

- a. 42 U.S.C. 2473(c)(1), Section 203(c)(1) of the National Aeronautics and Space Act of 1958, as amended.
- b. 7 U.S.C. 2131 et seq., the Animal Welfare Act of 1966, as amended.

### 4. REFERENCES

- a. 9 CFR Chapter I, Subchapter A, Animal Welfare, Parts 1, 2, 3, and 4, U.S. Department of Agriculture (USDA).
- b. 14 CFR Part 1232, Care and Use of Animals in the Conduct of NASA Activities.
- c. NPD 1440.6, NASA Records Management.
- d. NPG 1441.1, NASA Records Retention Schedule.
- e. U.S. Department of Health and Human Services, Public Health Service Policy on Humane Care and Use of Laboratory Animals (1986).
- f. United States Interagency Research Animal Committee, U.S. Government Principles for the Utilization and Care of Vertebrate Animals Used in Testing, Research, and Training (1985).
- g. National Research Council, Guide for the Care and Use of Laboratory Animals (1996).

h. Council for International Organizations of Medical Sciences, International Guiding Principles for Biomedical Research Involving Animals (1985).

## 5. RESPONSIBILITY

a. The NASA Chief Health and Medical Officer (CHMO) has overall responsibility for this NPD, including the conduct of regular reviews of the implementation of the policies described in this NPD, and is the Authorized NASA Official for the care and use of animals. The CHMO may delegate duties of the Authorized NASA Official to a senior individual in the office of the CHMO. The CHMO is also responsible for the following:

- (1) Appointing the NASA Chief Veterinarian, who shall be a NASA civil service employee or appointed under an Intergovernmental Personnel Act provision and report to the CHMO.
- (2) Designating a NASA representative for the Interagency Research Animal Committee (IRAC).
- (3) Implementing the provisions of this NPD and ensuring that all agency programs and activities involving animals comply fully with all applicable laws, regulations, and guidelines.
- (4) Establishing and maintaining mechanisms for obtaining timely information from OLAW of all cases in which the assurance of an institution involved in NASA research has been withdrawn by the PHS; and notifying NASA Institutional Animal Care and Use Committees (IACUC), Center Directors, and Research and Flight Program Managers of such revocations so that they can determine if NASA awards involving the use of animals are affected and take appropriate actions. The Authorized NASA Official may designate a representative for these functions.
- (5) Reviewing all sanctions imposed by Center Directors or IACUC's to determine if further sanctions are warranted or, at his or her discretion, initiating investigations of alleged noncompliance with this NPD, and imposing sanctions when warranted.
- (6) Establishing a NASA Flight ACUC (NFACUC) responsible for reviewing and approving all NASA-supported flight activities in the United States involving animals, regardless of launch site or site of performance (includes both aircraft and spacecraft vehicles). The NFACUC will also review all NASA-supported flight activities involving animals which are conducted in other countries; however, the primary responsibility for those activities rests with the host country.

b. Center Directors are responsible for the following:

- (1) Signing the Center's Assurance, making a commitment on behalf of the Center that the requirements of this NPD will be met. Center Directors may delegate authority for the day-to-day management of their Center's Animal Care and Use Program, but they retain the ultimate responsibility for ensuring compliance with this NPD, the Animal Welfare Act (AWA), PHS policy, and the Animal Care and Use Guide at their Centers.
- (2) Establishing and supervising the functions of their Center's IACUC. This responsibility may be accomplished through the use of another Center's IACUC via a formal inter-Center agreement.
- (3) Signing and submitting to OLAW the Animal Welfare Assurance, committing the Center to the requirements of the PHS policy and this NPD in all Center activities involving animal subjects, and providing copies of the approved Assurance, OLAW letter of approval, and any OLAW correspondence to the Authorized NASA Official.
- (4) Signing the application for AAALAC International Accreditation and the annual AAALAC International reports, and providing copies of the AAALAC International Accreditation letter, the annual reports, and any correspondence from AAALAC International to the Authorized NASA official.
- (5) Signing the annual report to the Department of Agriculture (USDA) and providing copies of the report, and any comments from USDA, to the Authorized NASA Official.
- (6) Deciding and administering sanctions in cases of noncompliance with this NPD in accordance with the AWA, PHS policy, and applicable NASA regulations, and notifying appropriate funding officials and the Authorized NASA Official.
- (7) Providing the Authorized NASA Official with copies of all IACUC minutes and reports.

c. The NASA IACUC's are responsible for approving any animal use conducted at their Centers.

d. The NASA Chief Veterinarian is responsible for the following:

- (1) Coordinating veterinary and animal care activities on an Agencywide basis. In accomplishing this responsibility, the NASA Chief Veterinarian is specifically authorized to suspend any animal activity believed to be noncompliant with applicable laws, regulations, this policy, and approved protocols. Following suspension of any activity, the Chief Veterinarian will initiate action, including IACUC re-review, to resolve the situation.

- (2) Guiding, as Chairperson, the activities of the NASA Animal Care and Use Policy Review Board (NACUPRB), composed of Center veterinarians; Chairs of each Center's IACUC; other representatives of each Center as appointed by Center Directors; and a public affairs specialist, a legal advisor, and others, as appointed by the Authorized NASA Official.
- (3) Advising the NASA CHMO on any aspect of the Agency's and its international partners' Animal Care and Use Programs.
- (4) Representing NASA in the external laboratory animal science community and associations, such as the American Association for Laboratory Animal Science and the American College of Laboratory Animal Medicine.
- (5) Maintaining coordination with the International Council for Laboratory Animal Science (ICLAS).
- (6) Participating in development of, and reviewing and approving, requirements for all animal facilities and equipment for flight, as related to animal care and use.
- (7) Developing and implementing a program to foster and encourage the use of alternate methods of research that reduce the numbers of animals used, refine the procedures used to minimize or eliminate animal pain or distress, or encourage the use of procedures that do not require the use of animals. As part of this effort, the NASA Chief Veterinarian will establish and maintain liaison with organizations working in this field and will develop and maintain mechanisms for dissemination of information regarding new methods and protocols to potentially interested parties.
- (8) Developing and implementing for NASA investigators a continuing education program on the ethics and regulation of animal research and for non-NASA investigators an education program regarding the requirements and constraints for in-flight aerospace animal research.
- (9) Informing participating international entities and individuals about the technical requirements in accordance with U.S. laws, regulations, guidelines, standards, and this NPD. This will include information regarding the requirements and constraints for flight animal research activities.
- (10) Serving as Executive Secretary of the NFACUC.

e. The NASA contract, grant, cooperative agreement, reimbursable agreement, or other arrangement or agreement officer is responsible for ensuring that this policy is incorporated, as appropriate into the governing agreement.

## 6. DELEGATION OF AUTHORITY

None.

## 7. MEASUREMENTS

Adherence to this NPD will be measured through strict tracking of requirements outlined herein and detailed in NASA NPG 8910.x, Care and Use of Animals Guidelines. In general terms, for all NASA-sponsored research involving animals, the requirements will include verification of accreditation and certifications, and regular monitoring of research activities, of sanctions imposed, and of corrective actions taken.

## 8. CANCELLATION

NPD 8910.1, dated March 23, 1998.

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**/s/ Sean O'Keefe**  
**Administrator**

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## ATTACHMENT A: (TEXT)

NASA Principles for the Ethical Care and Use of Animals

Introduction

A strong allegiance to the principles of bioethics is vital to any discussion of responsible research practices. As reflected in the considerations of the National Commission for the Protection of Human Subjects, "scientific research has produced substantial social benefits ...[and] some troubling ethical questions" (The Belmont Report, 1979). The Belmont Report identified the key fundamental principles underlying the ethical evaluation of research involving human subjects. Similarly, the principles governing the ethical evaluation of the use of animals in research must be made equally explicit.

It is generally agreed that vertebrate animals warrant moral concern. The following principles are offered to guide careful and considered discussion of the ethical challenges that arise in the course of animal research, a process that must balance risks, burdens, and benefits. NASA will abide by these principles, as well as all applicable laws and policies that govern the ethical use of animals. It is recognized that awareness of these principles will not prevent conflicts. Rather, these principles are meant to provide a framework within which challenges can be rationally addressed.

### Basic Principles

The use of animals in research involves responsibility, not only for the stewardship of the animals, but to the scientific community and society as well. Stewardship is a universal responsibility that goes beyond the immediate research needs to include acquisition, care and disposition of the animals, while responsibility to the scientific community and society requires an appropriate understanding of and sensitivity to scientific needs and community attitudes toward the use of animals.

Among the basic principles generally accepted in our culture, three are particularly relevant to the ethics of research using animals: respect for life, societal benefit, and nonmaleficence.

#### 1. Respect for Life

Living creatures deserve respect. This principle requires that animals used in research should be of an appropriate species and health status, and the research should involve the minimum number of animals required to obtain valid scientific results. It also recognizes that the use of different species may raise different ethical concerns. Selection of appropriate species should consider cognitive capacity and other morally relevant factors. Additionally, methods such as mathematical models, computer simulation, and in vitro systems should be considered and used whenever possible.

#### 2. Societal Benefit

The advancement of biological knowledge and the improvements in the protection of the health and well-being of both humans, and other animals provide strong justification for biomedical and behavioral research. This principle entails that in cases where animals are used, the assessment of the overall ethical value of such use should include consideration of the full range of potential societal goods, the populations affected, and the burdens that are expected to be borne by the subjects of the research.

#### 3. Nonmaleficence

Vertebrate animals are sentient. This principle entails that the minimization of distress, pain, and suffering is a moral imperative. Unless the contrary is established, investigators should consider that procedures that cause pain or distress in humans may cause pain or distress in other sentient animals.

### (URL for Graphic)

None.

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